Introduction

Users who are already familiar with previous versions of *RACER* might want to be aware of the new features and technologies, as well as the additional flexibility and time-saving enhancements that were added to the 2003 version. An important change within *RACER* 2003 is the update of the *RACER* 2003 Cost database, where all unit costs have been updated for all material, labor, and equipment costs. Previous databases (i.e. estimates from RACER 2001 & 2002), which are imported into *RACER* 2003, can be updated to utilize these costs, rather than previous year if specified by the user.

RACER successfully completed a formal verification, validation and accreditation (VV&A) process in 2001. It is important to note that *RACER* 2003 continues to be certified by the *RACER* Government Technical Review Group as complying with established system validation and verification process.

1. NEW FEATURES WITHIN RACER 2003

No Markup Preference

This feature allows the user to enter assemblies into a "No Markups" table. This new functionality, which is implemented through the Preferences menu, applies globally to all estimates using assemblies in the "No Markups" table, irrespective of whether an estimate uses System Costs or User-Defined Costs.

Drawings Added to Help Menus

Technical drawings have been added to fourteen (14) existing technologies in the RACER help system. This new feature allows the user to view drawings depicting the remedial technology. The following is a list of technologies with new technical drawings added to the help system: Air Stripper, Carbon Adsorption (Liquid), Capping, In-Situ Soil Vapor Extraction, Ex-Situ Soil Vapor Extraction, Groundwater Extraction Wells, Excavation, Ex-Situ or In-Situ Land Farming, Carbon Adsorption (Gas), Heat Enhanced Vapor Extraction, In-Situ Biodegradation (Saturated Zone), UST Closure/Removal, Soil Washing, and Groundwater Monitoring Wells.

Tab Notes

This new feature allows the user to enter comments or notes for each tab of each technology in *RACER*. The tab notes functionality is displayed when the user presses the F5 key. All tab notes for a particular technology are displayed when the user press the F6 key. Tab notes can be saved to a new table in the RACER database and/or to an external file. Tab notes can be viewed in the technology reports or in the folder level Cost Summary Report.

Template Updater

This new utility removes unused markup, labor, analytical, and professional templates from the RACER database.

New Utility to Upgrade the RACER Database

The user is now able to upgrade multiple RACER databases to the 2003 version. The utility will update databases from RACER 2001 or 2002. The utility will not operate with RACER 2000 (or earlier) databases. This new utility is found in the Utilities section of the RACER menu bar

New Conversion Calculator

The user will now be able to select the "Conversion Calculator" from the Help dropdown menu when working in any technology. The calculator will have conversions for area, volume, metric, speed, temperature, time, and density. The Microsoft Calculator can be accessed in the same area in RACER as well.

Sorting

The *RACER* system now allows the user to sort the tree display on the left side of the main RACER screen at Level 1 (by Project ID or Name) and Level 3 (by Phase Start Date).

2. NEW RACER TECHNOLOGIES

Bioslurping Model

This new treatment model for Bioslurping is based on the current Soil Vapor Extraction technology model. It utilizes elements of both, bioventing and free product recovery, to address two separate contaminant media.

Ordnance & Explosive Sifting Model

The new Ordnance and Explosives (OE) Sifting model allows the user to estimate the cost of an OE Sifting project. This model includes costs associated with visiting a potential Ordnance (UXO) sifting site, preparing the site for a sifting operation, excavating the site, backfilling the excavation, managing the project, and stakeholder involvement.

3. UPDATED TECHNOLOGIES & FEATURES

Reports

The user has the option to run reports without escalation.

OEM & ICT Update

For *RACER* 2003, Earth Tech has redirected the existing labor assemblies to the appropriate UXO personnel assemblies that were added to the *RACER* system for the

Ordnance Removal Action (OEA) and the Ordnance & Explosives Site Characterization and Range Assessment models.

Interim & Remedial Action Wizard

RACER's Wizard has been updated to incorporate primary and secondary media and contaminants. A total of 6 new steps have been added to the wizard allowing the user a more thorough approach to technology selection.

Operations & Maintenance Wizard

The user has the ability to change run time percentages for all O&M years using a single entry rather than year-by-year.

Registration Routine

The registration routine for *RACER* 2003 has been changed, so that *RACER* can be updated from versions one or two years prior. A new validation key also is required.